

at pages 5-6, paragraphs 14 and 15, indicates that these claims are rejected. The Office Action is therefore inconsistent in terms of its treatment of at least dependent claims 6 and 7, and is thus believed to be improper. Applicants respectfully request that this impropriety in the outstanding Office Action be remedied. Moreover, any subsequent Office Action should be indicated as having a non-final status, such that Applicants can be provided with an opportunity to respond to a clear disposition for each of the pending claims.

Claims 1, 10, 11, 13, 14, 19 and 20 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,253,359 (hereinafter "Spix"). Applicants respectfully traverse the §102(b) rejection, for the reasons specified below.

Applicants note that the Manual of Patent Examining Procedure (MPEP), Eight Edition, August 2001, §2131, specifies that a given claim is anticipated "only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the "identical invention . . . in as complete detail as is contained in the . . . claim," citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applicants respectfully submits that the Examiner has failed to establish anticipation of at least independent claims 1, 13, 19 and 20 by the Spix reference.

Each of independent claims 1, 13, 19 and 20 involves testing a digital system comprising a plurality of processors, and includes limitations relating to defining at least a subset of the processors as forming a group of processors to be subject to common control and delaying issuance of one or more commands for the group until a group scan command is received for each of the processors in the group.

The present invention as set forth in these claims provides a number of significant advantages over conventional approaches. For example, the claimed arrangements allow the multiple processors to perform synchronous or pseudo-synchronous operations without requiring excessive coupling between individual processor debug systems as in the conventional approaches. In addition, the processor grouping can be altered dynamically to allow for multiple groups of processors on the

same scan chain and the alterations of these groups during a single debugging session. This control mechanism of the present invention is thus reusable for different numbers and arrangements of processors.

Applicants submit that the Spix reference fails to teach or suggest at least the above-noted limitations of each of independent claims 1, 13, 19 and 20, and furthermore fails to provide the associated advantages of the claimed invention.

The Examiner in formulating the §102(a) rejection argues that Spix is anticipatory of the above-described limitations. Applicants respectfully disagree. Spix relates to a control and maintenance subsystem network for use with a multiprocessor computer system. It is unrelated to the subject matter of the present invention, namely, scan testing of multiple-processor integrated circuits or other digital systems. More specifically, Spix fails to teach or suggest an arrangement in which the issuance of one or more commands for a group of processors subject to common control is inhibited or otherwise delayed until a group scan command is received for each of the processors in the group.

The Examiner argues that Spix in the power up sequence flow chart of FIG. 6 discloses the claimed arrangement in which the issuance of one or more commands for a group of processors subject to common control is inhibited or otherwise delayed until a group scan command is received for each of the processors in the group. However, this is not the case. The process described in the flow diagram in FIG. 6 of Spix and its associated text does not, for example, delay power up of a given processor until all processors are ready to power up. The associated text at column 10, lines 40-42 of Spix states with regard to the Maintenance Control Units (MCUs) that “[t]he power distribution MCU is then ready to accept requests from other MCUs 212 to adjust the power up status 214 of various devices.” The flow chart of FIG. 6 further makes it clear that steps 212 and 214 occur for different MCU requests individually and sequentially. As a result, corresponding device adjustments occur individually and sequentially, without any delay in issuance of a command for a group until a group scan command is received for each of the processors in the group.

Applicants also note that Spix fails to provide any teaching or suggestion whatsoever regarding the claimed group scan command. One possible example of such a group scan command

in an illustrative embodiment of the present invention is described as follows at page 6, lines 1-9 of the specification:

A group scan command in the illustrative embodiment refers generally to a final JTAG scan command that occurs before a desired synchronous or pseudo-synchronous behavior. The group scan command generated by one of the TAP managers in a group is delayed by the chain manager 106 until the TAP managers for all other group members issue a group scan command. The individual commands of the groups are then merged, and synchronously and simultaneously scanned into the scan chain 110 by the chain manager 106.

The chain manager 106 thus delays the issuance of the group scan commands for the members of the group until all members of the group arrive at an equivalent state in their control sequences.

It is clear that a group scan command of the type claimed is not shown or described in the Spix reference.

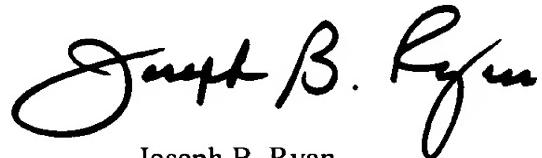
For the reasons identified above, it is respectfully submitted that Spix fails to teach or suggest the limitations of each of independent claims 1, 13, 19 and 20. The §102(b) rejection is believed to be improper and should be withdrawn.

Independent claim 15 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Spix in view of U.S. Patent No. 6,263,373 (hereinafter “Cromer”). Claim 15 includes limitations similar to those of claims 1, 13, 19 and 20, and is therefore believed allowable for at least the reasons identified above. The Cromer reference fails to supplement the fundamental deficiencies of Spix with regard to these limitations. The Spix and Cromer references, even if assumed to be combinable, fail to teach or suggest all of the limitations of claim 15. The §103(a) rejection over Spix and Cromer is therefore believed to be improper and should be withdrawn.

Dependent claims 2-12, 14 and 16-18 are believed allowable for at least the reasons identified above with regard to their respective independent claims. The rejections of these claims should therefore also be withdrawn.

In view of the above, Applicants believe that claims 1-20 are in condition for allowance, and respectfully request withdrawal of the §102(b) and §103(a) rejections.

Respectfully submitted,



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